

U.S. Department
of Transportation
**Federal Highway
Administration**

**LTPP Seasonal Monitoring
Program**
Site Monitoring Suspension
Status Report
Section 100102
Ellendale, Delaware

SEASONAL MONITORING PROGRAM SUSPENSION STATUS REPORT

DELAWARE SECTION 100102

I. INTRODUCTION

The seasonal site 100102 near Ellendale, Delaware was installed on October 04 - October 05, 1995. Seasonal data was collected continuously from October 05, 1995 to October 31, 1996 (Table 1) and September 30, 1997 to December 22, 1998 (Table 2). On October 22, 1998, site suspension activities were completed at this site according to LTPP Directive SM-8 "Suspension of SMP Site Monitoring Activities". The exception for this site was that the instrumentation was left in place. NARO field operations are scheduled to be in the area of the SMP site over the next year. The environmental data can be collected at these periods by the RCOC field crew. A site from the DE SPS-1 experiment has been included in the LTPP SMP-II project. At the time of installation for this site, the above ground instrumentation will be moved from the 100102 site to the new location, to be instrumented with in-ground sensors.

II. SUSPENSION PREPARATION ACTIVITIES

The suspension preparation activities at site 100102, with the exception of a manual distress and transverse profile survey were conducted during the final visit on October 22, 1998. A manual distress survey of the entire section and cross profile survey were conducted in conjunction with the SMP data collection at site 100102 on October 01, 1998. In addition the section markings were refreshed.

There is no distress evident; this site was overlaid in September 1996 due to localized distress in the wheel paths. The localized distress was removed (100mm of existing pavement milled and replaced), followed by a 50mm lift of hot mix asphalt. The entire SPS-1 project was then paved with a 25mm Open Graded Asphalt Concrete (OGAC) surface course.

During the de-commission on October 22, 1998, three sets of FWD tests were conducted, one set of elevations, and a distress survey of the instrument area. No distress is evident at the instrument hole areas as the above mentioned overlay covered the area where the instrumentation was installed. Water table measurements were taken in the morning and afternoon. Two sets of TDR traces were extracted by the mobile datalogger. It should be noted that a resistivity probe has not been installed at this site. The Onsite data logger was downloaded. The datalogger and connections were cleaned, checked and then re-assembled. The tipping bucket was cleaned and calibrated, the air temperature probe was cleaned and checked. The program was then reloaded to the datalogger, the time set to standard time and the system operation monitored to ensure all instrumentation was working.

The TDR cables were sprayed with anti-corrosion compounds and sealed with desiccant packs in airtight bags. All cables were hung up high inside the equipment cabinet. After the last piezometer readings was recorded, the pipe was cleaned and sealed with grease. The access cover and seat were cleaned and lubricated before being covered and brought up to grade with native soil.

The Profilometer survey corresponding to close-out was conducted on November 05 1998. The IRI at the time of the survey was 0.843m/km.

All the necessary suspension activities, with the exception of the MDS and cross profile survey were completed on October 22, 1998. The instrumentation was cleaned and calibrated; all instrumentation remain at this site as NARO will visit the site periodically to collect Onsite (environmental) data during visits to nearby sites.

III. SPECIAL SITE CONDITIONS

The installation of site 100102 followed the "LTPP Seasonal Monitoring Program: Instrument Installation and Data Collection Guidelines" closely except this site, as noted above, does not contain a resistivity probe. It should also be noted that this site has Campbell Scientific TDR probes installed as opposed to FHWA manufactured probes. The site was overlaid with a 50mm lift of hot mix asphalt because of premature deterioration. As a result of the overlay in September 1996, the depth of the MRC sensors #1 and #3 are not in accordance with LTPP Guidelines. In addition, MRC sensors #1 and #2 malfunctioned in May of 1996. There were no other irregularities. Pictures of the site are provided at the end of this document. The above ground instrumentation at this site will be moved to another site within the Delaware SPS-1 project as part of the LTPP SMP-II Plan (fall 1999).

TABLE 1

[illegible]

TABLE 2

Agency Code (1 0)
 LTTP Section I.D. (0 1 0 2)
 Location Ellendale, DE

[illegible]

Table 3 . Surface Elevation Measurements

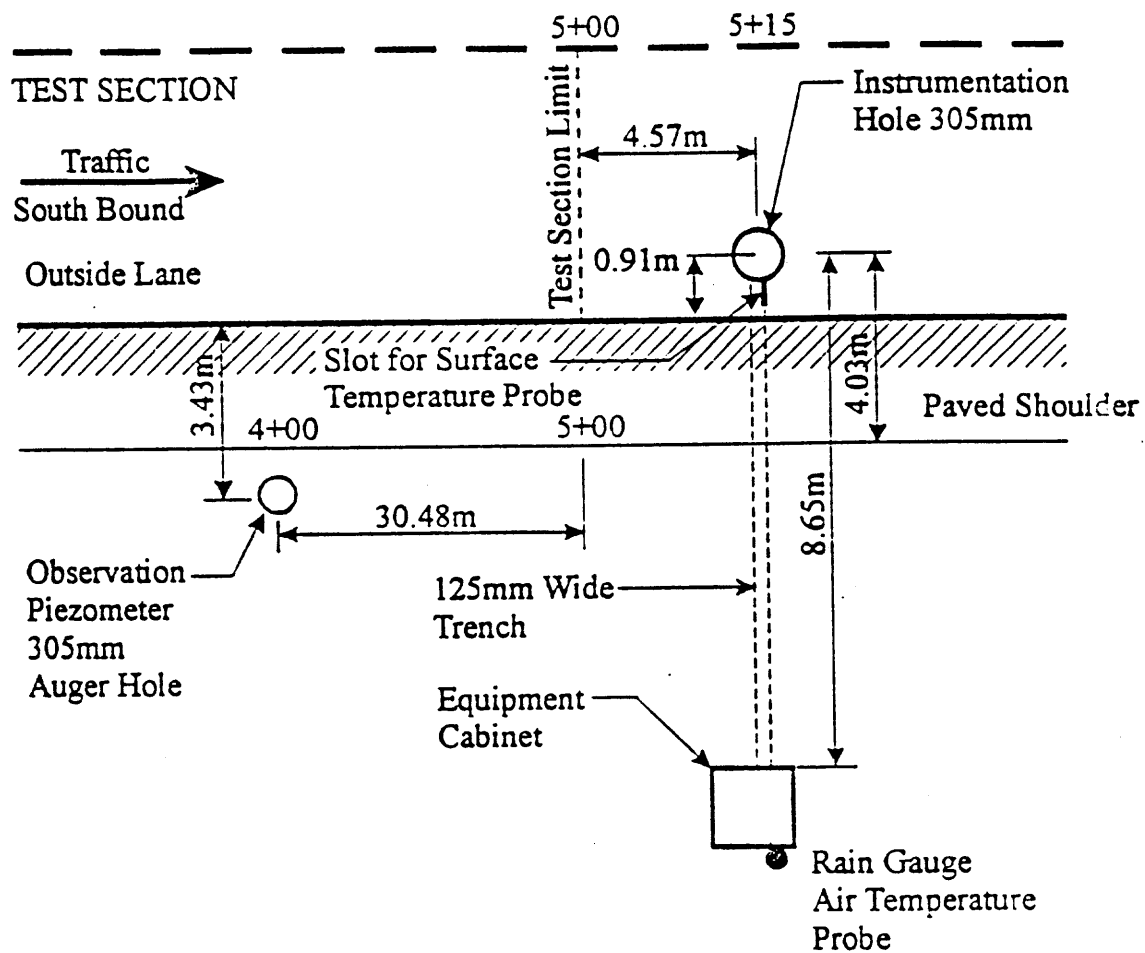
LTPP Seasonal Monitoring Study	State Code	[10]
Surface Elevation Measurements	Test Section Number	[0102]

Survey Date	October 22, 1998
Surveyed By	James Vogt
Surface Type	AC
Benchmark	Observation Piezometer - 1.000 meters - assumed

STATION	PE m offset 0.15	OWP m offset 0.81	ML m offset 1.83	IWP m offset 2.74	ILE m Offset 3.63
3+00	1.2950	1.2975	1.3150	1.3250	1.3375
3+25	1.2950	1.3050	1.3750	1.3350	1.3550
3+50	1.3100	1.3150	1.3375	1.3475	1.3625
3+75	1.3200	1.3300	1.3500	1.3600	1.3750
4+00	1.3425	1.3475	1.3700	1.3775	1.3925
4+25	1.3475	1.3575	1.3725	1.3875	1.3925
4+50	1.3575	1.3625	1.3750	1.3950	1.4050
4+75	1.3650	1.3725	1.3875	1.4025	1.4150
5+00	1.3775	1.3850	1.4100	1.4150	1.4250
5+09	1.3825	1.3875	1.4025	1.4100	1.4250
5+15	1.3850	1.3900	1.4050	1.4200	1.4300
5+21	1.3900	1.3925	1.4125	1.4200	1.4350

PE	Pavement Edge
OWP	Outer Wheel Path
ML	Mid Lane
IWP	Inner Wheel Path
ILE	Inner Lane Edge

Notes: 1. Offsets are measured from the PK nails at the outside of the pavement stripe at the pavement edge.



- Height of Air Temperature Probe: 2.77m
- Height of Tipping Bucket Rain Gauge: 2.77m
- Depth of Piezometer: 4.31m

Figure 1. Location of Seasonal Monitoring Instrumentation Installed at SPS 100102



Pavement Condition, Seasonal Site 100102, October 1998, Pre Suspension Activities



Pavement Condition, Seasonal Site 100102, October 1998, Pre Suspension Activities